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ABSTRACT

Today's most promising techniques for differentiating reading teaching are noted to be those which focus upon the individuals within the classroom. Short descriptions are given of nine programs which differentiate reading instruction, and the reader is urged to adopt their most promising features. Programs described are intraclass grouping (multiple grouping within the classroom), varied exposure to reading in kindergarten, individualized reading, team teaching, programed instruction, computer-assisted instruction, pupil learning according to need (PLAN), individually prescribed instruction, and personalized progress. A 29-item bibliography is included. (Author/NH)

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TODAY'S TECHNIQUES FOR DIFFERENTIATING TEACHING

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BY

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Horace Mann beat Henry Ford in popularizing the assembly line technique when he imported the graded school organization from Prussla in the middle of the last century. In doing so he pulled a collosal boner!

Almost immediately teachers began to find that children's minds are not uniformly structured like machines. Each child is a custom-made job whose growth requires special fittings. So as early as 1880 many schools began experimenting with various types of track and grouping systems in attempts to provide for individual differences. Several plans flourished briefly and then fizzled. Usually their failure was recognized when people other than the original enthusiastic innovators tried to put them into operation in other schools.

During the period of American panic after the first Russian sputnik some of the old unsuccessful plans were resurrected as modern panaceas, sometimes with new-sounding names. These attempts to grease the squeaks out of the old assembly line have often been forms of homogeneous class sectioning or more recently, the Joplin cross-class procedure. The inadequacy of the homogeneous sectioning, or ability grouping, procedure as a means of improving learning has been clearly shown in a summary of studies prepared by Borg (6) as well as through other research (11). Newport's equally helpful summary of studies on the Joplin inter-class ability grouping procedure revealed that those experiments which appeared to yield favorable results were of no more than one year in duration. Experiments which lasted long enough for the novelty effect to wear off yielded Joplin plan results which were no better and sometimes less adequate than results with other types of organization (18).

Administrative grouping procedures cannot make positive contributions to learning because they attempt to provide situations where whole classes of youngsters are taught as a crowd, instead of providing the differentiated stimulation necessary to nurture each child according to his unique background and capabilitites. Administrative grouping procedures are especially damaging to good reading instruction when they:

--increase the number of children a teacher must work with, thereby making it impossible to do adequate diagnostic work and to know the family and personal problems which may affect each child's learning

--reduce the opportunities to teach reading in various fields of study during more than one period of the day

--reduce the flexibility in time which can be alloted to individual children for reading work (24).

While administrative grouping procedures seem to have little value other than novelty, studies have shown that differentiation of teaching within the classroom really pays off (15,29). Apparently individualization of a personal type is necessary because of the extent of human variability and the complexity of the reading task. As many as 400 different reading outcomes for only the elementary years have been listed (5). Other studies have shown that children who may appear to be similar on average scores for a reading test battery are far more variable in individual skills patterns than most teachers recognize (3,19). Therefore today's most promising techniques for differentiating reading teaching are those which focus upon the individuals within the classroom.

1. Intraclass Grouping (Multiple Grouping within the Classroom). This is, of course, the most common approach to differentiated teaching, and it can be helpful even in departmentalized or cross-class systems where the teacher deals with many different children. Working with a small group, the teacher is able to do continuous diagnosis and impress upon the children his or her sincere concern for each individual. One writer recently mentioned, also, that the close face-to-face small group prevents the children from tuning out the teacher, makes possible the use of facial expressions and body movements to signal additional meanings, encourages spontaneous participation in language activities, enables the children to learn from each other, and gives them a feeling of group security (21). Consequently intraclass grouping is a valuable part of several other differentiation systems also.

Interclass grouping has been criticized rightfully when it becomes an inflexible caste system that causes some children to develop inadequate self concepts. Therefore to modernize this procedure it has been recommended that three types of grouping be practiced concurrently: power grouping, skills refinement grouping, and reading activity grouping (24). The power groups are those which have usually been called basal groups. Whether basal or other developmental instructional materials are used, this grouping brings children together according to general reading power for the introduction of new vobabulary and skills.

Because most children forget or fail to learn some skills adequately the first time, they all need to be retaught occasionally, Therefore the teacher should form a skills refinement group by drawing from the various power groups the half-dozen children who need more help with one specific skill. In addition to meeting in their regular power groups, the children

in this skills group should meet for ten or twenty minutes for one or more days until they have mastered the needed skill. Then a new skills refinement group should be formed to meet for a few days to receive special help with another skill.

Additional flexibility in grouping is possible with reading activity groups, which are formed by individuals from the various power groups to meet during one reading period a week to share enthusiasm for stories and language activities beyond the developmental skills core. Younger children may engage in reading activities related to such topics as holidays and animals, while older ones may read all of a favorite author's books or seek and share material about a relevant social concern. Although they may actually meet as groups only once a week, children will be using every spare minute every day to locate and read material on the topics which they are pursuing.

2. Varied Exposure to Reading in Kindergarten. Durkin's studies (9) on children who read before entering school have stimulated much debate between educators who believe all children would be taught reading in kindergarten and those who believe none should read in kindergarten. Meanwhile, teachers who are especially sensitive to individual differences have sought ways of exposing kindergartners to experiences through which some will learn reading skills informally while others pleasantly develop readiness for reading. At the Falk Laboratory School we have found that some children quickly gain a sight vocabulary through a reading exposure program involving sensory experiences, vocabulary games, flashcard directions, experience chart stories, and individually dictated stories (23). As the year progresses, children who are advancing rapidly will meet several

times a week in a reading group while other groups continue with the usual construction and creative play activities.

It's high time that all schools began to provide adequately for individual differences in kindergarten so that children who are ready to read early have an opportunity to do so!

3. Individualized Reading. When following the individualized reading approach, the teacher encourages each child to select any book which he wants to read and then teaches him individually the skills he needs to read it. The plan calls for two or more individual conferences to be held with the child each week to motivate him, check on his progress, and teach the skills that are appropriate at the time. Publications of several types are available to guide the teacher (8, 4).

At first glance individualized reading appears to be the ultimate in differentiated teaching, but research has revealed that it has both advantages and disadvantages (22). Children seem to especially enjoy the personal attention the conferences, and often they read more books than previously. Some teachers are able to teach the skills successfully through the conferences, while others are less successful.

Many teachers have found it to be inefficient to teach skills entirely individually when they could save time by teaching three or four children together if they are progressing at similar rates. Consequently, while some teachers have adjusted to time pressures by holding conferences much less frequently than needed (2), others have moved toward grouping for skills (20). Some of the most successful programs, in fact, have deviated from the individualized reading philosophy by including definite segments of group work (27). Individualized reading is a fine approach for highly dedicated teachers who will spend as much time as it requires for planning and conferences. "It has made a definite impression on teachers by making

them more aware of pupil differences," according to Rothrock, but he finds. . . "that in actual practice it has probably been absorbed into the total reading program as a part of an eclectic plan for part of the year or for part of the reading period." (20)

4. Team Teaching. When several teachers cooperate in the teaching of several classes, there is an opportunity for them to take turns working with large and small groups in oder to give attention to individual needs. However, in practice it too often seems that only those children who are extremely "slow" or exceptionally able learners receive the individual attention, while the majority are "lost in the crowd." In elementary schools another problem is that teaming may beeome simply a form of departmentalization. In fact, one young teacher told me that she was the phonics instructor for seven classes of beginners--she taught them all at one time on the intercom! This is hardly what I call individualized teaching! It's different, but not differentiated! Perhaps the tendency in some situations for too much large group teaching is the reason why research findings do not seem to support team teaching without reservation.(13, 16).

Teaming can contribute to differentiated work if the teams are kept relatively small. If only three or four secondary teachers make up a team and they spend all of their time working with the same three or four classes, they can study cooperatively many children in depth and get to know their skills needs and personal problems much better than in the usual fully departmentalized situation. Likewise, when a team of only two or three elementary teachers, with the assistance of an aide, work with only two or three classes, they can become familiar with individual difficulties, and the

special competencies of one teacher may balance the shortcomings of another in planning and teaching.

5. Programmed Instruction. When using a programmed work pad, the child examines picture, words, or printed statements, and makes an oral or written response for each item, or frame, on the page. In doing so he learns and practices a precise set of reading skills that have been built into the program.

Programmed work is largely self-taught, so the child can progress entirely at his own rate. For many children the constant satisfaction of making approved responses reinforces learning and encourages continued effort. There are, however, some children who may be "turned off" by the process, because their backgrounds have not prepared them to obtain satisfaction from those learnings which have been programmed. And for an additonal proportion the lack of variation or human interaction in the process may lead to boredom or to the habit of beating the system by copying the self-checking answer key. Programmed instruction seems to be based on the premise that all children learn in the same way and for the same reasons.

Among other disadvantages, the most frequently used reading program (28) places an extremely heavy emphasis on preliminary learning of letter sounds and the synthesis of sounds into words. While the importance of a solid word attack program is well supported by research, there also is clinical evidence that a significant proportion of reading comprehension disabilities are caused by the child's habit of being overanalytical. The programmed approach does little to provide for different modes of learning or for different interests.

Extensive field studies in Denver (7) and in Colorado Springs (17), which have been very favorable to programmed instruction, have been questioned concerning the adequacy of control comparisons and novelty effects (12). In a more recent study in Philadelphia, Hammil and Mattleman found no significant differences in achievement among second and third grade groups that used programmed materials, basal readers, or a combination of programmed and basal materials (12). Another research team, after reviewing conflicting findings in experiments on programmed instruction, reported an experiment which concluded that significantly higher achievement was attained when programmed materials were used as a supplement to basal materials (10). This suggests that it would be tremendously helpful if the independent skills lessons that accompany all reading programs could be in the self-taught and self-correct form. It also suggests that programmed instruction would be an appropriate way to introduce selected skills, if it were not used exclusively as the instructional approach.

6. Computer-Assisted Instruction. In a highly refined form of programmed instruction the child is seated at a computer terminal where he receives information and directions through television and makes his responses on an electric typewriter. Responses are checked immediately by the computer and must be correct in order to permit further progress.

Although the potential of computerized teaching for differentiated work seems great, the development of programs is extremely complicated and expensive. Therefore they have been used only experimentally to date (1). Criticism has been levelled at one major trial program because of features related to its highly mechanical nature: overemphasis on phoneme

synthesis and word recognition out of context, lack of variation in reinforcements, and the dehumanizing lack of teacher-pupil and pupil-pupil interaction (26).

If we remember that it is even more important to teach children how to be human beings than to read, probably we shall move toward using computer-assisted programs and other forms of programmed instruction to teach selected skills individually as children need them to read separately published materials. Then programs will become tools controlled by creative teachers instead of instruments that an Educational Big Brother uses in predetermining the exact mental mold into which each child will grow.

7. PLAN--Pupil Learning According to Need. One of the most recent innovations, PLAN uses the computer primarily to score tests, keep records of pupil progress through a series of units, and advise the teacher which outcomes of a unit have been attained by the individual. Each child works partly alone and partly with his reading power group in following a study guide that gives specific directions for each step of work in the unit. Three separately published basal programs and a rich supply of cassette tapes and filmstrips are used.

PLAN was initiated in 1967 by American Institutes for Research and the Westinghouse Learning Corporation. It was tested in a few selected schools initially and has gradually been expanded until it will serve 264 schools in the fall of 1970 (14).

Its greatest advantage is the amount of assistance given to teachers in analyzing the skills needs of individuals. It provides for human interaction in groups, while combining self-directed work and teacher directed work. Also, it gives the teacher three somewhat different options of pro-

grams in which children can be placed. Inherent weaknesses are the difficulty teachers might have in providing needed program variations beyond the three sets of prepared study guides, and the danger of teachers forcing all children into only three power groups to fit the materials.

8. Individually Prescribed Instruction. During approximately the last five years several millions in Federal funds have been available to the University of Pittsburgh and the Baldwin-Whitehall schools for developing a curriculum which emphasizes independent work and progress at individual rates. Individually prescribed instruction, as described by Beck and Bolvin (5), follows a four-stage approach to reading. The prereading stage focuses upon letter names, letter sounds, auditory blending, and word identification. The decoding stage, using the Sullivan Associates' Programmed Reading, begins to give attention to meanings. The stage of comprehension and skills development, stresses literal, interpretative, and evaluative comprehension, while the final stage focuses on independent reading. The program directors say that

> "...throughout the program there is considerable reliance on worksheets; tape and disc recordings; programmed materials; individual readers; selected materials from reading kits such as SRA, Macmillan Reading Spectrum; as well as manipulative devices such as the language master. The program contains approximately 4,000 staff prepared workpages and 600 staff prepared disc recordings and response sheets." (5)

The emphasis is on individual self-instruction using these carefully sequenced lesson materials, but groups are sometimes brought together "to present new ideas and processes." With each step of progress, tests are used to assess individual accomplishment and readiness for advancement. These are checked by aides, and the results are used by the teacher in writing individual prescriptions for the next learning step which each child should take as he seeks the appropriate lesson from numbered compartments in an extensive lesson library.

The thoroughness of the testing procedures and the complete flexibility in rate of progress are two of the greatest strengths of the system. IPI has been criticized for the dehumanizing features of programming--a relatively small amount of human interaction, and lack of provision for different kinds of learning experiences and sequences for children whose backgrounds and learning modes vary from the average. The developers are working on modifications to offset these shortcomings.

9. Personalized Progress. Developed over a number of years at the campus laboratory school of the University of Pittsburgh, the personalized progress plan is an attempt to combine the best recommendations from many sources for highly differentiated teaching. It features a combination of organizational patterns (multi-age heterogeneous class sections, nongraded curriculum, and modified team teaching) with use of a large variety of basal and individual reading materials. Children are assigned to elementary school classes at three general levels--primary, midgroup, and intermediate--plus a junior high block. There is a chronological age range of two to four years in each class and a wider range in reading achievement (25).

Teachers use various diagnostic and achievement tests to verify their observations of reading skills needs, and to group children into five to seven power groups plus flexible reading skills refinement and activity groups. A great deal of independent reading is encouraged by the reading activities, but children regularly meet in small groups to receive instruction and to engage in discussions which sharpen their thinking while developing increased appreciation for literature.

Although each teacher works with the full range of pupil capability for his general class level, it is possible for two teachers to exchange a few pupils during reading periods if they temporarily fit better in groups in another room. The "slower" pupils are never exchanged, however, because experience has shown that they do not make adequate reading progress unless they remain with their homeroom teachers. Each teacher is able to know a child extremely well because most individuals remain with a homeroom teacher two years. Others may remain one, one and a half, or three years in a room according to their success in working with one or more of the small groups there.

The personalized progress plan makes the individual child more important than the structure, giving the teacher full responsibility for diagnosing needs and determining the instructional variations which are most suitable for each client. There is no limitation on the quantity and types of materials that can be utilized. The wide spread of age and achievement in each room makes it possible for each child to work with others who stimulate him intellectually during class sessions while socializing with different individuals who fulfill his personal needs during periods of relaxation.

Personalized progress requires teachers who are professionally competent, personally concerned about each individual child, and willing to be in frequent contact with the parents. This could be a serious disadvantage in schools where teachers prefer to be clockwatchers rather than professionals, but our experience has been that such requirements actually stimulate marked personal growth in young teachers.

Various models available. After a century of effort to break away from the graded school lockstep, we now have several functioning models for differentiating reading instruction. Let us lose no more time in adopting their most promising features as we move forward into the seventies.

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